

layer "may be formed of any dielectric material" (*Liu*, col. 7, lns. 29-30), the etch stop layer is "[t]ypically and preferably ... formed of a silicon nitride or a silicon oxynitride etch stop material" (*Liu*, col. 9, lns. 51-54; emphasis added).

In comparison to *Liu*, *Jang* describes a different dual damascene process. (*Jang*, col. 2, lns. 64-67; e.g., FIGs. 1-4.) In the dual damascene process of *Jang*, a polymer (e.g., FLARE) is used in an etch stop layer. (*Jang*, col. 5, ln. 62 to col. 6 ln. 12.) In addition, *Jang* describes the formation of a trench dielectric layer before forming the holes of the via pattern. (*Jang*, layer 18, FIG. 1; layer 38 FIG. 5; and layer 58, FIG. 9.)

The Examiner states that it would be obvious to utilize a polymer such as FLARE in the etch stop layer of *Liu* because FLARE "would possess suitable etch resistant properties while etching the appropriate dielectric layers."

Applicant respectfully does not agree. Applicant submits that the Examiner's asserted motivation - because FLARE "would possess suitable etch resistant properties while etching the appropriate dielectric layers" - does not comport with the description found in *Liu*.

Applicant respectfully submits that *Liu* teaches away from using a polymer in the etch stop layer. First, *Liu* describes use of a polymer in the first dielectric layer and the second dielectric layer. (*Liu*, col. 7, lns. 17-23.) Thus, providing a low dielectric constant material in the first dielectric layer and the second dielectric layer. As such, if there is any reason to use a polymer in *Liu* - it is in the first dielectric layer and the second dielectric layer - not the etch stop layer as asserted by the Examiner. Indeed, once a polymer is used in the first dielectric layer and the second dielectric layer - thus already providing a low dielectric constant material - why would one now want to use a polymer

material as the etch stop layer? Especially when, as noted above, *Liu* teaches the use of a silicon nitride or a silicon oxynitride etch stop material - not a polymer.

Second, although *Liu* states that the etch stop layer "may be formed of any dielectric material" (*Liu*, col. 7, lns. 29-30) - this does not suggest the use of a polymer in the etch stop layer. Indeed, and as noted above, the etch stop layer of *Liu* is "[t]ypically and preferably ... formed of a silicon nitride or a silicon oxynitride etch stop material." (*Liu*, col. 9, lns. 51-54; emphasis added.) That is, *Liu* describes a dual damascene process that preferably uses a silicon nitride or a silicon oxynitride etch stop material - not a polymer.

Finally, the Damascene process of *Liu* is different from the Damascene process of *Jang*. As such, Applicant respectfully submits that the use of a polymer etch stop in the Damascene process of *Jang* does not mean that one skilled in the art would consider using a polymer etch stop in the Damascene process of *Liu* - especially when *Liu* specifically describes the use of a silicon nitride or a silicon oxynitride etch stop material.

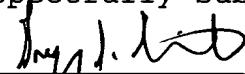
As a result, Applicant respectfully submits that claim 1 is patentable of *Liu* in view of *Jang*. As such, the basis of the rejection of dependent claims 2-12 has also been removed.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that the Examiner telephone Applicant's attorney at (908) 654-5000 in order to overcome any additional objections that the Examiner might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By 

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